ecology and environment, inc.
CLOVERLEAF BUILDING 3, 6405 METCALF, OVERLAND PARK, KANSAS 66202, TEL. 913/432-9961

International Specialists in the Environment

MEMORANDUM

TO: Pete Culver, RPO

THRU: Sharon Martin, FITOM

FROM: E & E/FIT

DATE: April 26, 1991

SUBJECT: Summary and Recommendations for the Olin Water Services [Drew Industrial Division (Ashland Chemical Company)] site, Kansas City, Kansas, Wyandotte County, Kansas.
TDD #F-07-9003-005 PAN #FKS0285RA
Site #T98 Project #001
RCRA Contact: Mark Matthews
FIT Project Leader: Patty Roberts

SITE SUMMARY

As part of the U.S. Environmental Protection Agency (EPA) Environmental Priorities Initiative (EPI) Program, EPA has requested Ecology and Environment, Inc., Field Investigation Team (E & E/FIT) to conduct an EPI Preliminary Assessment (PA) of the Olin Water Services Facility [Drew Industrial Division (Ashland Chemical Company)] located at 305 Sunshine Road, Kansas City, Kansas. Drew Industrial Division (Ashland Chemical Company) is a subsidiary company of Ashland Oil, Inc.

The scope of the investigation included reviewing existing state and federal files and other literature to characterize regulated and non-regulated solid waste management units (SWMUs) at the facility and to access the probability of release(s) of hazardous substances from identified SWMUs to the local environment. The FIT conducted an on-site Visual Site Inspection (VSI) on April 27, 1990, to aid in identifying and characterizing SWMUs. EPA RCRA Branch was represented at the VSI by Mark Matthews and Paul Cahoon. Olin was represented by William Dames, plant manager; Larry Prouty, regulatory affairs manager; and William Olasin, representative of Ashland Chemical Company. The Olin Water Services manufactures chemicals for industrial water treatment facilities. The facility comprises the plant building, warehouse, and the production yard.

Since 1985, Olin has operated as a storage facility under a Part B Permit. Under the auspices of this permit, a three-sided cinder block building was constructed. All accumulated hazardous wastes are stored in this designated area. In addition to being a storage facility, the Olin site has been classified as a Kansas generator (generating between 25 and 1,000 kilograms of hazardous waste per month).

The waste generated during the chemical manufacturing process can vary and involves characteristic ignitable, corrosive, reactive, and/or toxic wastes. Spillage or wash down water from the formulating process is either recycled or discharged down the sanitary sewer system after analysis designates that it is within the parameters outlined under the pretreatment agreement with Kansas City, Kansas, for discharge to the Publicly Owned Treatment Works (POTW). Olin also generates a minimal amount of F001 wastes from laboratory operations.

The majority of wastes that are accumulated and stored in the permitted container storage area is from raw material and finished products that are unusable or off-specification. Some non-reusable rinse water from the formulating areas is also placed in this storage facility. These various wastes are characteristic hazardous wastes (D001, D002, D003, and D007) as denoted in 40 CFR Subpart C. Various U-listed wastes and non-hazardous wastes are also stored in the hazardous waste container storage area. The accumulated wastes are stored longer than 90 days. The last date that wastes are known to have been placed in the storage facility was November 4, 1989. Currently, the Olin facility is minimizing waste by re-using and reworking materials that would otherwise require disposal as a hazardous material.

In December 1989, Ashland Oil purchased the Olin facility and is in the process of modifying some operational procedures. These modifications include expanding the facility's product storage tank area, located east of the production plant, and the northern section of the warehouse; removing the self-contained volatile steam return (VSR) sump vat located adjacent to the southeast corner of the plant building; and disposing off site all hazardous waste stored in the RCRA-regulated container storage area. The use of certain chemical products, such as chromium and ignitable/flammable products, has been reduced. Currently, the majority of waste generated at the Olin facility is characteristic corrosive (D002); however, this can vary depending on customer demand for certain water treatment products. The facility's ownership, including the RCRA permit was transferred from Olin Water Services to Drew Industrial Division (Ashland Chemical Company) on December 29, 1989.

SOLID WASTE MANAGEMENT UNITS

The FIT identified six SWMUs at the Olin Water Services. The SWMUs identified are summarized in the following table.

SUMMARY OF SOLID WASTE MANAGEMENT UNITS

SWMU/Dates of Operation	Description	Release/Spill History	Further Action
Hazardous Waste Container Storage Area/1985 to present	This SWMU is a 3-sided cinder block building located in the production yard. The maximum number of drums stored in this facility is not to exceed 200 55-gallon drums. Both hazardous and non-hazardous (liquid and solids) wastes are stored here on a long-term basis. Plans call for all hazardous wastes in the container storage area to be disposed off site.	None Known	If SWMU is terminated; proper closure proceedings need to be conducted by Drew Industrial Division (Ashland Chemical Company).
VSR Sump Vat and Drainage/ after 1970 to present	This SWMU consists of an outside sump vat and in-floor trenches from the VSR Blending and Drum-off rooms. When appropriate, an activated pump is installed on the VSR sump vat and overflow is pumped into nearby 55-gallon drums. Spill over, washdown water, or any other wastes from the chemical formulating	Release of chromium July 29, 1986	None required at this time.

SUMMARY OF SOLID WASTE MANAGEMENT UNITS (Cont'd)

SWMU/Date of Operation	Description	Release/Spill History	Further Action
	process is collected in this self-contained drainage system. The generated waste is analyzed and the majority is either recycled or discharged down the sanitary sewer collection system after neutralization. If determined hazardous it is retained in the permitted container storage area.		
C/F Blending Room Drainage/after 1970 to present	This SWMU comprises an in-floor concrete drain topped with a metal grate encompassing the majority of the C/F Blending Room. The maximum capacity of this drainage system is 100 gallons. An on and off valve controls if this unit is continuous with the Fairfax sanitary sewer collection system. Generated wastes are analyzed and managed in the same manner as the VSR Blending Room.	None known	None required at this time
POTW Discharge Outlet/unknown to present	The plant discharge drain is a 12-inch piping system which extends throughout the plant building. This drainage system intercepts spill over or washdown water from	None known	None required at this time

SUMMARY OF SOLID WASTE MANAGEMENT UNITS (Cont'd)

SWMU/Date of Operation	Description	Release/Spill History	Further Action
	all concrete areas in the plant building except for the VSR and C/F Blending Rooms. The POTW discharge outlet is located on the west side of the plant building. Wastewater is analyzed and is discharged to the POTW (Kansas River) under the auspices of a pretreatment agreement with the city.		
Dumpsters/unknown to present	This SWMU consists of two steel non-hazardous solid waste receptacles. The amount of solid waste varies throughout the year and consists mostly of scrap building material and clean, rinsed, unusable drums.	None Known	None required at this time
Satellite Accumulation Area (lab wastes)	This unit is inside the Olin laboratory and consists of a 5-gallon safety can and a 30-gallon drum of collected chlorinated solvents (F001). F001 wastes are stored in the 30-gallon drum until full, then the drum is sealed and moved to the permitted container storage area, until shipment.	None Known	None required at this time

There is no documentation to indicate that a release(s) has occurred from any of the SWMUs described above, other than the 1986 chromium release from the VSR sump vat and drainage area. To prevent the reoccurrence of such a release, a float-activated pump was installed on the sump vat to prevent pump overflow during the production of chromium products. Four 55-gallon drums were also emplaced to accumulate waste water if the pump was activated. During the VSI, no release(s) or evidence of recent release(s) were observed. Waste handling practices were acceptable and the potential for releases in the plant building and permitted container storage area are low. Furthermore, Olin is in compliance with all pretreatment agreements required before discharge to the POTW.

The property east of the Olin Production Plant is of some notable concern since a State official noted a stained soil area around the sodium hydroxide product tank. No discoloration of the area was noted during the FIT VSI. However, it was observed that no secondary containment features are constructed around either of the product storage tanks or the VSR sump vat, which are located in this area. To better assess the area for any notable potential problem, a review of the Drew Industrial Division (Ashland Chemical Company) environmental audit, including results of the four to five monitoring wells installed in the eastern section of the property, should be conducted. This area should continue to be monitored during all subsequent RCRA compliance inspections.

Olin plans to dispose off site all hazardous waste now in the RCRA-regulated hazardous waste container storage area, and possibly terminate its status as a storage facility. If this SWMU is terminated, proper RCRA closure proceedings will need to be conducted.

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International Specialists in the Environment

MEMORANDUM

TO: Pete Culver, RPO

THRU: Sharon Martin, FITOM

FROM: E & E/FIT

DATE: October 22, 1991

SUBJECT: Summary and Recommendations for the Olin Water Services [Drew Industrial Division (Ashland Chemical Company)] site, Kansas City, Kansas, Wyandotte County, Kansas.
TDD #F-07-9003-005 PAN #FKS0285RA
Site #T98 Project #001
RCRA Contact: Mark Matthews
FIT Project Leader: Patty Roberts

SITE SUMMARY

As part of the U.S. Environmental Protection Agency (EPA) Environmental Priorities Initiative (EPI) Program, EPA has requested Ecology and Environment, Inc., Field Investigation Team (E & E/FIT) to conduct an EPI Preliminary Assessment (PA) of the Olin Water Services Facility [Drew Industrial Division (Ashland Chemical Company)] located at 305 Sunshine Road, Kansas City, Kansas. Drew Industrial Division (Ashland Chemical Company) is a subsidiary company of Ashland Oil, Inc.

The scope of the investigation included reviewing existing state and federal files and other literature to characterize regulated and non-regulated solid waste management units (SWMUs) at the facility and to access the probability of release(s) of hazardous substances from identified SWMUs to the local environment. The FIT conducted an on-site Visual Site Inspection (VSI) on April 27, 1990, to aid in identifying and characterizing SWMUs. EPA RCRA Branch was represented at the VSI by Mark Matthews and Paul Cahoon. Olin was represented by William Dame, plant manager; Larry Prouty, regulatory affairs manager; and William Olasin, representative of Ashland Chemical Company. The Olin Water Services manufactures chemicals for industrial water treatment facilities. The facility comprises the plant building, warehouse, and the production yard.

Since 1985, Olin has operated as a storage facility under a Part B Permit. Under the auspices of this permit, a three-sided cinder block building was constructed. All accumulated hazardous wastes are stored in this designated area. In addition to being a storage facility, the Olin site has been classified as a Kansas generator (generating between 25 and 1,000 kilograms of hazardous waste per month).

The waste generated during the chemical manufacturing process can vary and involves characteristic ignitable, corrosive, reactive, and/or toxic wastes. Spillage or wash down water from the formulating process is either recycled or discharged down the sanitary sewer system after analysis designates that it is within the parameters outlined under the pretreatment agreement with Kansas City, Kansas, for discharge to the Publicly Owned Treatment Works (POTW). Olin also generates a minimal amount of F001 wastes from laboratory operations.

The majority of wastes that are accumulated and stored in the permitted container storage area is from raw material and finished products that are unusable or off-specification. Some non-reusable rinse water from the formulating areas is also placed in this storage facility. These various wastes are characteristic hazardous wastes (D001, D002, D003, and D007) as denoted in 40 CFR, Part 261, Subpart C. Various U-listed wastes and non-hazardous wastes are also stored in the hazardous waste container storage area. The accumulated wastes are stored longer than 90 days. The last date that wastes are known to have been placed in the storage facility was November 4, 1989. Currently, the Olin facility is minimizing waste by re-using and reworking materials that would otherwise require disposal as a hazardous material.

In December 1989, Ashland Oil purchased the Olin facility and is in the process of modifying some operational procedures. These modifications include expanding the facility's product storage tank area, located east of the production plant, and the northern section of the warehouse; removing the self-contained volatile steam return (VSR) sump vat located adjacent to the southeast corner of the plant building; and disposing off site all hazardous waste stored in the RCRA-regulated container storage area. The use of certain chemical products, such as chromium and ignitable/flammable products, has been reduced. Currently, the majority of waste generated at the Olin facility is characteristic corrosive (D002); however, this can vary depending on customer demand for certain water treatment products. The facility's ownership, including the RCRA permit was transferred from Olin Water Services to Drew Industrial Division (Ashland Chemical Company) on December 29, 1989.

SOLID WASTE MANAGEMENT UNITS

The FIT identified six SWMUs at the Olin Water Services. The SWMUs identified are summarized in the attached table. There is no documentation to indicate that a release(s) has occurred from any of the SWMUs described above, other than the 1986 chromium release from the VSR sump vat and drainage area. To prevent the reoccurrence of such a release, a float-activated pump was installed on the sump vat to prevent pump overflow during the production of chromium products. Four 55-gallon drums were also emplaced to accumulate waste water if the pump was activated. During the finalization of this EPI-PA, Olin Water Services reported to FIT that the sump vat and float-activiated pump drainage system are no longer in service and have been permanently removed. During the VSI, no release(s) or evidence of recent release(s) were observed. Waste handling practices were accept able and the potential for releases in the plant building and permitted container

VAT a Regulated Unit?

storage area are low. Furthermore, Olin is in compliance with all pretreatment agreements required before discharge to the POTW.

Olin plans to dispose off site all hazardous waste now in the RCRA-regulated hazardous waste container storage area, and possibly terminate its status as a storage facility. If this SWMU is terminated, proper RCRA closure proceedings will need to be conducted.

The property east of the Olin Production Plant is of some notable concern since a State official noted a stained soil area around the sodium hydroxide product tank. Further, a June 1991 Pre-Acquisition Investigation (PAI) report, prepared by Civil & Environmental Consultants, Inc., and edited by Groundwater Technology, Inc., also indicated soil and ground water contamination at the property east of the plant building. The majority of soil contamination outlined in this report was around the southernmost tank (former cyclohexylamine and morpholine tank). The analysis of a composite soil sample collected from the 1.5 to 3.5 vertical interval at a location east of the cyclohexylamine and morpholine tank revealed the presence of pentachlorophenol (PCP) at a concentration of 22,000 µg/kg. Various polycyclic aromatic hydrocarbons (PAHs), some considered to be carcinogenic, were also detected in this sample at concentrations ranging from 930 µg/kg (phenanthrene) to 2,200 µg/kg [benzo(B)fluoranthene]. Similar contaminants were not detected in samples collected from nearby sample locations. The origin of the contaminants in the above mentioned sample locations, as well as their extent, both vertically and areally, warrant further investigation. The reported contaminant concentrations associated with the composite samples collected from the selected vertical sampling intervals may not have identified the more highly contaminated zones within the soil profile.

Future site characterization elements should include the identification of past activities in the vicinity of the former morpholine and cyclohexylamine tank that might explain the presence of elevated levels of PCP and PAH compounds. For example, the stockpiling of treated railroad ties in the area may have resulted in the deposition of these compounds.

Chromium was also detected in the soil around the south tank and former sump vat area. This metal contaminant can be attributable to the Olin facility since chromium products were once manufactured at the Olin Water Services facility. During the FIT VSI, no discoloration of the area east of the production plant was noted. However, it also observed that no secondary containment features are constructed around either of the product storage tanks.

Trichloroethylene (TCE) was detected in ground water samples collected from each of three monitoring wells installed during the PAI. TCE ground water concentrations ranged from 5.9 to 34 µg/L. Although a site-related source of the TCE contamination was not identified during the PAI, evidence of onsite soil contamination was revealed; a sample collected from the 1.5 to 4.0 foot interval, collected at the south lot

of the production plant, was reported to contain TCE at a concentration of 58 µg/kg. The use and handling of TCE at the Olin Water Services may warrant further investigation.

It should be noted that a follow-up investigation was initiated following examination of the PAI results; the scope and findings of the follow-up investigation are not yet available. Once completed, the follow-up investigation report may provide a more complete characterization of the origin, nature, and extent of contamination identified in the PAI report. It is the intent of the EPI-PA report, however, to examine available data to identify perceived data gaps, and to recommend additional site characterization activities. Therefore, FIT recommends further site investigation work in the area east of the production plant by the company with oversight by State and/or EPA officials. After review of the Drew/Ashland follow-up investigation report, this recommendation may be unnecessary. An HRS evaluation is also advisable to determine if a potential threat exists to human health and the environment.

Finally, in reviewing the details of the PAI, it was determined that the report may fall under the auspices of Confidential Business Information (CBI) and the appropriate handling of the document specified in 40 CFR, Part 2, Subpart 2 may be necessary.

SUMMARY OF SOLID WASTE MANAGEMENT UNITS

SWMU/Dates of Operation	Description	Release/Spill History	Further Action
Hazardous Waste Container Storage Area/1985 to present	This SWMU is a 3-sided cinder block building located in the production yard. The maximum number of drums stored in this facility is not to exceed 200 55-gallon drums. Both hazardous and non-hazardous (liquid and solids) wastes are stored here on a long-term basis. Plans call for all hazardous wastes in the container storage area to be disposed off site.	None Known	If SWMU is terminated; proper closure proceedings need to be conducted by Drew Industrial Division (Ashland Chemical Company).
VSR Sump Vat and Drainage/ after 1970 to present	This SWMU consists of an outside sump vat and in-floor trenches from the VSR Blending and Drum-off rooms. When appropriate, an activated pump is installed on the VSR sump vat and overflow is pumped into nearby 55-gallon drums. Spill over, washdown water, or any other wastes from the chemical formulating	Release of chromium July 29, 1986	None required at this time.

SUMMARY OF SOLID WASTE MANAGEMENT UNITS (Cont'd)

SWMU/Date of Operation	Description	Release/Spill History	Further Action
	process is collected in this self-contained drainage system. The generated waste is analyzed and the majority is either recycled or discharged down the sanitary sewer collection system after neutralization. If determined hazardous it is retained in the permitted container storage area.		
C/F Blending Room Drainage/after 1970 to present	This SWMU comprises an in-floor concrete drain topped with a metal grate encompassing the majority of the C/F Blending Room. The maximum capacity of this drainage system is 100 gallons. An on and off valve control if this unit is continuous with the Fairfax sanitary sewer collection system. Generated wastes are analyzed and managed in the same manner as the VSR Blending Room.	None known	None required at this time
Continuous Sewer Discharge Outlet and Associated Piping/unknown to present	The plant discharge drain is a 12-inch piping system which extends throughout the plant building. This drainage system intercepts spill over or washdown water from	None known	None required at this time

SUMMARY OF SOLID WASTE MANAGEMENT UNITS (Cont'd)

SWMU/Date of Operation	Description	Release/Spill History	Further Action
	all concrete areas in the plant building except for the VSR and C/F Blending Rooms. However, as of October 1991, the VSR Blending Room drainage system has an on and off valve, which controls if the unit is continuous with the Fairfax sanitary sewer system. The plant's discharge outlet is located on the southwest side of the plant building. Wastewater is analyzed and is discharged to the POTW (Kansas River) under the auspices of a pre-treatment agreement with the city.		
Dumpsters/unknown to present	This SWMU consists of two steel non-hazardous solid waste receptacles. The amount of solid waste varies through-out the year and consists mostly of scrap building material and clean, rinsed, unusable drums.	None Known	None required at this time
Satellite Accum-ulation Area (lab wastes)	This unit is inside the Olin laboratory and consists of a 5-gallon safety can and a 30-gallon drum of collected chlorinated solvents (F001). F001 wastes are stored in the 30-gallon drum until full, then the drum is sealed and moved to the permitted container storage area, until shipment.	None Known	None required at this time